

OWI INC

USER MANUAL: Model: AMP-BT-602-1

Speaker Combination Models

AMP-BT-602-1 / AMP-BT-602-2 / AMP-BT-602-4
AMP-BT-602-1SVC / AMP-BT-602-2SVC / AMP-BT-602-4SVC



Surface Mount Amplified Speaker



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Technical Support 310-515-1900

OWI User Manual: Model AMP-BT-602-1 Speaker Amplifier

PROPRIETARY NOTICE

The OWI Inc. product information and design disclosed herein were originated by and are the property of OWI Inc. OWI Inc. reserves all patent, proprietary design, manufacturing, reproduction, use and sales rights thereto, and to any article disclosed therein, except to the extent right(s) are expressly granted to others.

COPYRIGHT NOTICE

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UNPACKING AND INSPECTION NOTICE

Immediately upon receipt of the equipment, inspect the shipping container and the contents carefully for any discrepancies or damage. Should there be any, notify the freight company and OWI, Inc. or the dealer where purchased at once.

LIMITED WARRANTY

1. This product has been thoroughly tested and inspected at the factory. It is warranted for one year from the date of purchase.
IT IS THE OWNERS' RESPONSIBILITY TO ESTABLISH THE DATE OF PURCHASE BY ACCEPTABLE EVIDENCE AT TIME SERVICE IS SOUGHT.
2. Any unit, which in the judgment of OWI INC, is defective or develops defects under normal use will be replaced or repaired without cost within the warranty period.
3. This warranty will be considered void if the unit is dropped, misused, abused and altered in any manner, overdriven with excess amplification exceeding manufacturer's specification, improperly serviced or accidentally damaged.
4. OWI Inc. shall have no liability whatsoever for consequential damages. The sole responsibility at the discretion of OWI Inc. under this warranty shall be limited to the repair of the product or replacement thereof. Any and all implied warranties including the implied warranty of merchantability are limited to the duration of this express limited warranty.
OWI, Inc. is NOT liable for incidental or consequential damages of any kind.
5. IMPORTANT: This warranty is void unless the attached card is completed and mailed to OWI Inc. within 10 days following the date of purchase. Units must be sent to OWI Inc. or to the dealer where purchased.

RETURN SHIPPING INSTRUCTIONS, Obtain a RETURN AUTHORIZATION from:

OWI Inc., 17141 Kingsview Ave, Carson, CA 90746.

Phone (310) 515-1900, Fax (310) 515-1606

FCC Notice: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his or own expense.

Modifications not expressly approved by the manufacturer could void the user's authority to be operated under FCC rules.

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IMPORTANT SAFETY INSTRUCTIONS

CAUTION



RISK OF ELECTRIC SHOCK - DO NOT OPEN



NOTE: Installation is to be completed by a qualified electrical technician according to NEC/CEC code and applicable local codes.

CAUTION: The power supply is not to be used in air handling spaces.

CAUTION: To reduce the risk of electric shock: Do not remove the cover or back: No user-serviceable parts inside: refer servicing to qualified personnel.

The lightning flash with arrowhead within an equilateral triangle is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions. All the safety and operation instructions should be read before this OWI product is operated.
2. Keep these instructions - The safety and operating instructions should be kept for future reference.
3. Heed all warnings - All warnings on this product and in these operating instructions should be followed.
4. Follow all instructions - All operating and other instructions should be followed.
5. Do not use this apparatus near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, near a swimming pool, or a swamp.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer’s instructions. - This OWI product should be situated so that its location or position does not interfere with its proper ventilation. For example, the component should not be situated on a bed, sofa, rug, or similar surface that may block any ventilation openings, or placed in a built-in installation such as a bookcase or cabinet that may impede the flow of air through ventilation openings.
8. Do not install the unit near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wider blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit the apparatus.
11. Only use attachment/accessories specified by the manufacturers.



Portable Cart Warning

12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped. The user should not attempt to service this OWI product beyond those means described in this operating manual. All other servicing should be referred to the OWI Service Department.
15. **WARNING:** To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
16. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle or other outlet unless the blades can fully be inserted to prevent blade exposure.
17. Exposure to extremely high noise levels may cause permanent hearing loss. Individuals vary considerably in susceptibility to noise-induced hearing loss, but nearly everyone will lose some hearing if exposed to sufficiently intense noise for a period of time. The U.S. Government's Occupational Safety and Health Administration (OSHA) has specified the permissible noise level exposures shown in the following chart. According to OSHA, any exposure in excess of these permissible limits could result in some hearing loss. To ensure against potentially dangerous exposure to high sound pressure levels, it is recommended that all persons exposed to equipment capable of producing high sound pressure levels use hearing protectors while the equipment is in operation. Ear plugs or protectors in the ear canals or over the ears must be worn when operating the equipment in order to prevent a permanent hearing loss if exposure is in excess of the limits set forth here.
18. OWI recommends that this apparatus be placed on a switched power outlet, one that switches both sides and has contact separation of at least 3 millimeters.

End of IMPORTANT SAFETY INSTRUCTIONS

Introduction

The OWI **AMP-BT-602-1** is a self powered speaker/amplifier. This unit can drive up to four speakers connected series parallel to have a net impedance of 8 ohms. With an included UL Listed, **Level 5** (Energy Star), 15 volt, 3.5 ampere power supply, the amplifier can output 40 watts, or 10 watts per speaker in a four speaker hook-up.

Special features of the OWI Model AMP-BT-602-1 include:

Bluetooth Feature

Certified SIG Bluetooth Version 3.0, Frequency Range 2.40 – 2.48 MHz, Supports A2DP, AVRCP, HFP/HSP and SPP, Password Protected.

Energy Star Mode

If no audio is present on any input, the power consumption of the speaker amplifier is less than one (1) watt.

Two (2) audio inputs: Line In and Jack Line In

The **LINE IN** inputs accepts a balanced input via a Phoenix style screw terminal plug. The **JACK LINE IN** accepts unbalanced input via 3.5 mini jack. The mini jack accept stereo inputs. The stereo channels are summed together. This input is muted during Priority Override.

Priority Override Feature

The **Priority** input accepts balanced input levels of resistor selected 100 volts audio, 70 volts audio, 25 volts audio and 1 volt (approximately line level) audio. Audio on the **Priority** input suspends audio on the **Line In and Jack Line In** inputs and switches the speaker amplifier to pass the **Priority** audio. After the **Priority** audio stops, the unit waits before returning to the **Line In and Jack Line In** audio input.

Balanced Line Level Output

A nominal 0dB level, balanced output is available at LINE OUT. The source of this output is both balanced and Jack Line In sources.

Power Amplifier Features

The power amplifier outputs 2 times 20 watts or 40 watts total into 8 ohms and 15VDC power. The class D power amplifier has reduced radiated electromagnetic interference (EMI) due to a special feature of the power amplifier, operating in a patented spread spectrum. The power amplifier protects itself from over-temperature, over-current, over-voltage conditions. The power amplifier will shut itself down during these conditions.

IMPORTANT NOTE! This amplifier is intended for audio use only! Continuous sine wave drive into a load will cause the amplifier to shut itself down when it heats up.

SPECIFICATIONS (AMP-BT-602-1)

| BLUETOOTH SPECIFICATIONS |
|---------------------------------------|
| AMP-BT-602-1 |
| Certified SIG Bluetooth Version 3.0 |
| Frequency Range 2.40 – 2.48 MHz |
| Supports A2DP, AVRCP, HFP/HSP and SPP |
| Password Protected |

| ELECTRICAL AMPLIFIER | AMP-BT-602-1 |
|---------------------------------------|---|
| Input voltage, nominal | (25 watts) 15 volts DC |
| Input current, operating (15VDC) | 1.667 amperes peak |
| Input volt-amperes, peak (15VDC) | 25 volt-amperes |
| Input voltage, maximum | 16.5 volts, DC |
| Frequency Response, | |
| EQ set to flat | 50Hz to 15 kHz |
| Bass | ±10dB@50Hz |
| Treble | ±10dB@10kHz |
| THD + Noise | <1% at 15 watts, "A" weighted |
| S/N | >90 dB |
| Max Power Output (28V in) | 2 times 20 watts or a total of 40 watts |
| DC Power, Standby | 1.5 watts |
| AC Power, Sleep Mode (Energy Star) | less than 1 watt |
| DC Power, | |
| Short Circuit protected | Yes |
| Over current protected | Yes |
| Over voltage protected | Yes |
| Over temperature protected | Yes |
| Minimum Load Impedance | 4.0 Ω (Two 8 Ω Speakers in parallel) |
| Minimum Input impedance, Priority in | 20,000 Ω |
| Minimum Input impedance, Bal. Line in | 820 Ω |
| Minimum Input impedance, mini-jack | 2300 Ω |
| Dynamic Mic input impedance | 300 Ω |
| Warranty | 1 year |

POWER SUPPLY

| PS15VDC35AL5 | SPECIFICATIONS |
|--------------------------|--|
| Input | 100 to 240 VAC, 50-60 Hz, 1.4A Note: Be sure to use the correct polarity on the power input. |
| Output | 15 VDC, 3.5 amperes |
| Wire gauge and length | Minimum 18 gauge up to 40 feet maximum length |
| Electrical, Power Supply | UL Listed, Level 5 (Energy Star) |
| Weight | 0.45 pounds |
| Size | 4.7"H x 2"W x 1.2"D |

CAUTION: The Power Supply is not to be used in air handling spaces.

**Note: Maximum power requires the replacement of the 15 volt supply with a 22 volt supply and Energy Star and UL approvals no longer apply.*

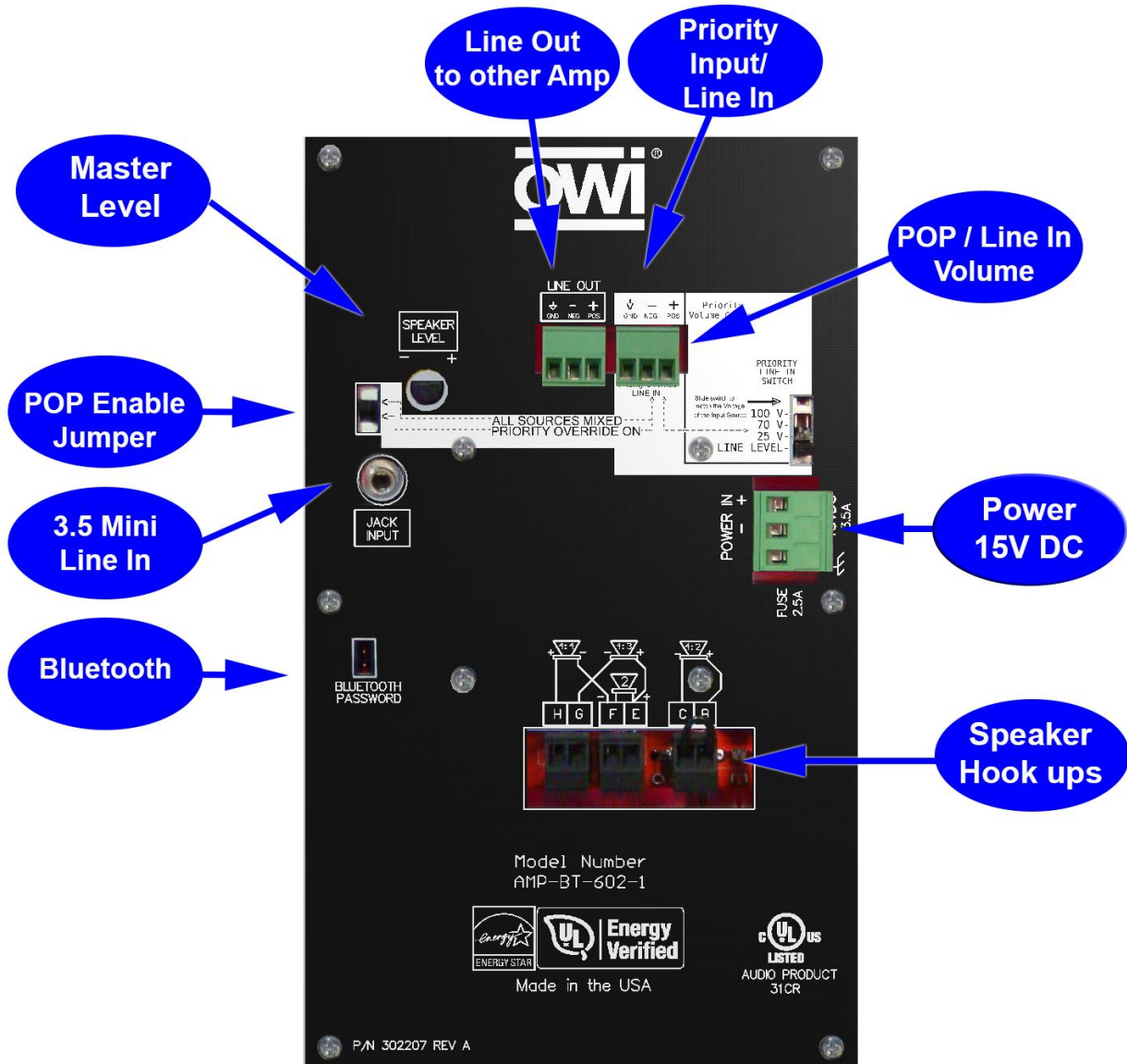
Power Supply Wire Gauge and Length - Minimum 18 gauge up to 40 feet maximum length

OWI User Manual: Model AMP-BT-602-1 Speaker Amplifier

| NON-AMPLIFIED SPEAKER | |
|--|-------------------------------------|
| | P602 |
| DESCRIPTION: | 6.5" Passive Cabinet Speaker |
| OUTDOOR: | NO |
| IMPEDANCE: | 4Ω |
| SENSITIVITY (1W/1M): | 86 dB |
| DISPERSION: | 92° |
| MAX POWER (8 Ohms): | 30 W |
| NOMINAL POWER (8 Ohms): | 15 W |
| FREQUENCY RESPONSE: | 80 Hz - 20 kHz |
| CROSS OVER: | 3.5 kHz |
| HIGH FREQUENCY DRIVER: | 1.5 kHz - 20 kHz |
| LOW FREQUENCY DRIVER: | 80 Hz - 6 kHz |
| WOOFER SIZE: | 6.5" |
| WOOFER MATERIAL: | Mica / Foam Surround |
| TWEETER SIZE: | .79" (20 mm) |
| TWEETER MATERIAL: | PEI |
| GRILL MATERIAL: | FE |
| OVERALL DIMENSIONS (Diameter X Height - Inches/mm): | 9.5 x 8.46 x 11.3 (242 x 215 x 288) |
| WEIGHT: lbs. | 10 lbs. / 4.5 kgs |

End of Specifications

Illustration: Connection and Control



AMP-BT-602-1 TO ANOTHER AMP-BT-602-1 SPEAKER WIRING SINGLE LINE DIAGRAM

Chained Self Amplified Speakers Wiring

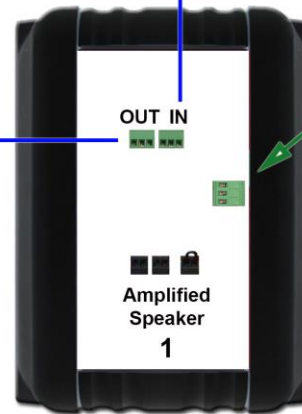
AMPLIFIED SPEAKER TO ANOTHER AMPLIFIED SPEAKER WIRING DIAGRAM

To add more Amplified Speakers, connect the output of the Amplified Speakers to the input of the next Amplified Speaker



**TO AMPLIFIED SPEAKER 4
(UP TO 10 MAXIMUM CONNECTED
AMPLIFIED SPEAKERS)**

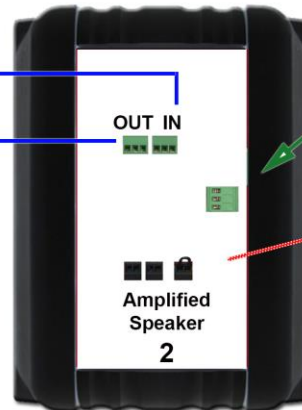
SOURCE / INPUT
(DVD / CD / MP3 Player)



One Amplified Speaker



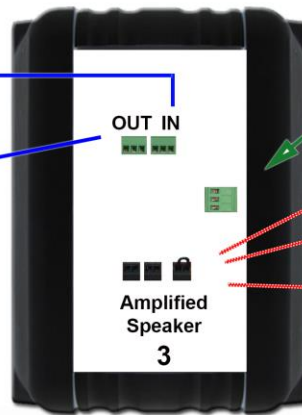
15 VDC
Power Supply



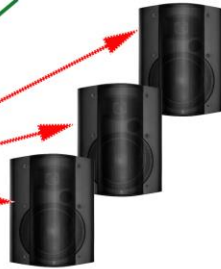
Two Speaker Combo



Non-amplified
Speaker
Model P602



Four Speaker Combo



Non-amplified
Speakers
Model P602

BLUETOOTH OPERATION

Discovery

- When the speaker amp is first turned ON, the Red LED light will turn ON and the speaker amp should be discoverable by a Bluetooth enabled device such as a PC, tablet, iPhone or other smartphone.
- Open the device Bluetooth manager and review its list of discoverable Bluetooth devices. The speaker amp will appear as OWI-XXXX where XXXX is the last 4 digits of the speaker amp MAC address. Note: The speaker amp MAC address is identified on a label located on the speaker amp board.

Pairing

- Select the OWI-XXXX Bluetooth device from the list and the device will pair with the speaker amp. Note: If the speaker amp is password protected, you will be required to enter the correct PIN before the pairing process will begin. If the PIN has not been changed on the speaker amp, entering 1234 will begin the pairing process.

Operation

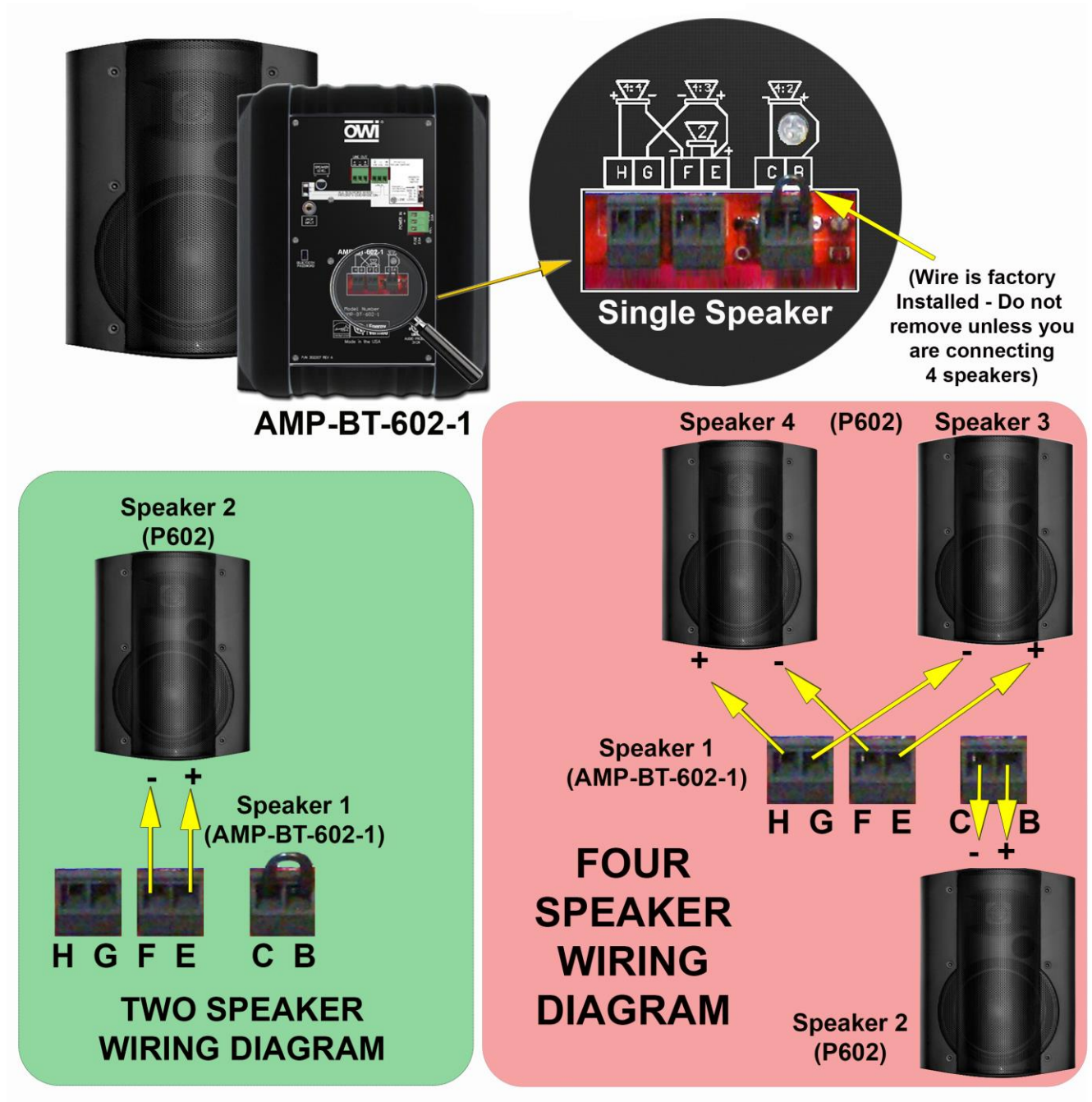
Once the speaker amp is paired with the device, audio from the device should pass through and be heard from the speaker(s) connected to the speaker amp.

Reset Bluetooth settings

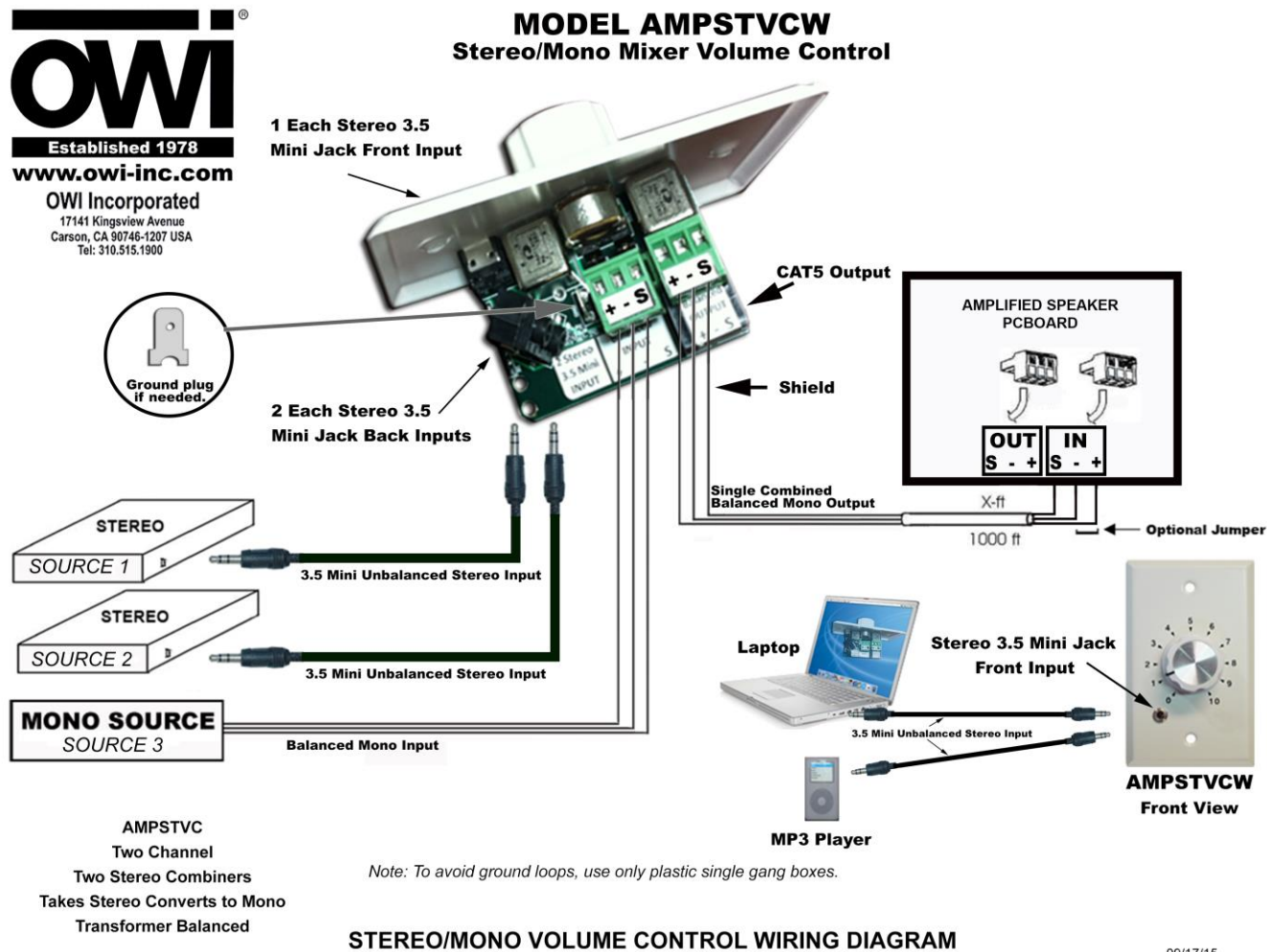
It is possible to reset all Bluetooth settings including the Bluetooth PIN to the factory default values.

- Turn the power OFF to the speaker amp.
- Locate the 5pin header on the speaker amp board.
- Plug in the reset receptacle onto the header.
- Turn the power ON to the speaker amp.
- Wait 10secs
- View the newly generated PIN listed on your device 'PIN XXXX' where XXXX is the new PIN. Note: every time the reset receptacle is installed onto the 5pin header, a new PIN will be generated.
- Write down the PIN and keep in a safe place.
- Turn the power OFF to the speaker amp.
- Remove the reset receptacle from the 5pin header.
- All Bluetooth settings including the PIN have been reset to the factory settings.

One, Two, Four Speaker Combination Wiring



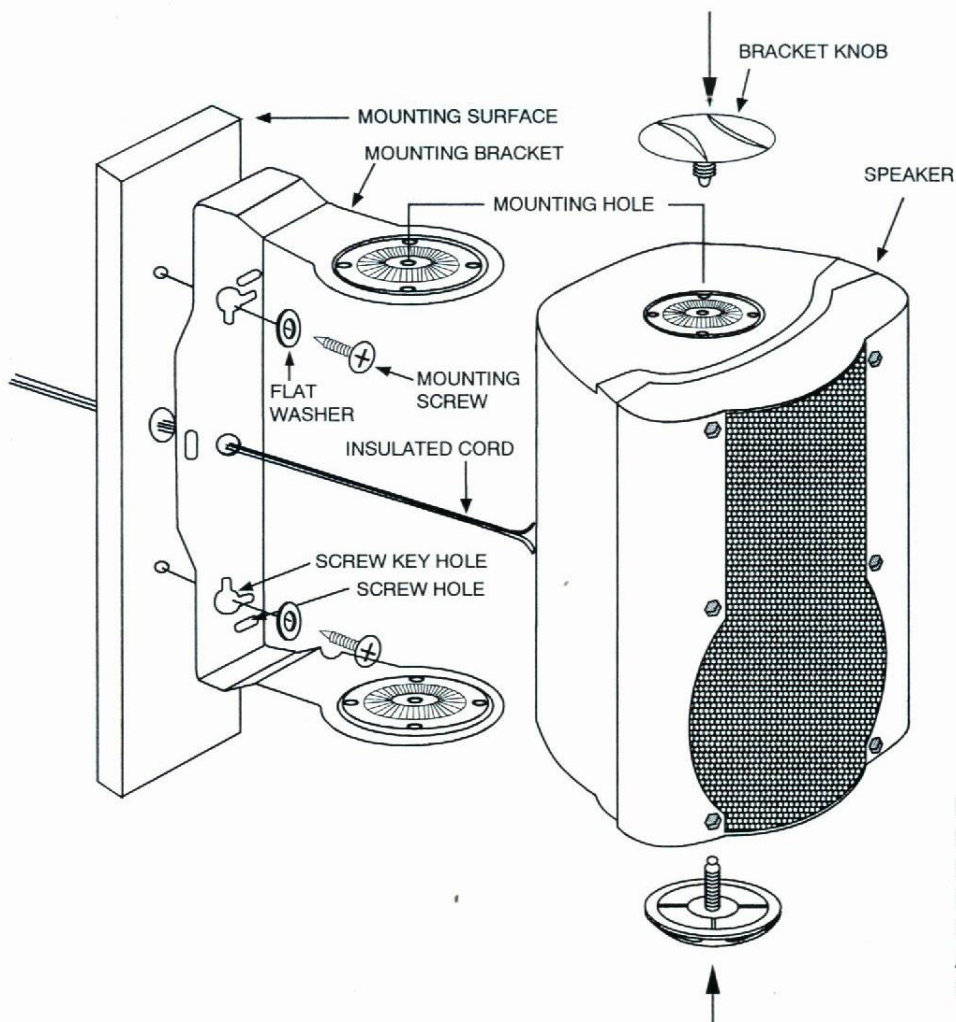
VOLUME CONTROL WIRING DIAGRAM



09/17/15

INSTALLATION/MOUNTING INSTRUCTION

- 1) When mounting speakers, use the mounting bracket as a template for marking and drilling three holes.
- 2) Assemble mounting screws, spring washers, flat washers and nuts to attach mounting brackets to mounting surface. Note that:- Screws, washers and nuts provided are for mounting the cabinet from both sides of the mounting location. For any other type of mounting, please consult your local hardware store for appropriate mounting screws.
- 3) Follow installation directions included with your amplifier (or receiver). Strip 1/2" (12mm) of insulation from each of the two conductors of the wire to expose the bare metal and twist each into a single strand. [Connect the speaker wire to the terminals using the (+) as RED and the (-) as the BLACK]
- 4) Adjust position of the speaker to obtain the desired sound dispersion.



OWI SPEAKER SYSTEM LIMITED WARRANTY REGISTRATION

(Save this portion for your records)

1. Your OWI Speaker System has been thoroughly tested and inspected at the factory.
It is warranted for 1 year from date of purchase.
IT IS THE OWNERS' RESPONSIBILITY TO ESTABLISH THE DATE OF PURCHASE BY ACCEPTABLE EVIDENCE AT TIME SERVICE IS SOUGHT.
2. WHAT WE WILL PAY FOR AND WHAT YOU MUST PAY FOR:
OWI INC. will repair or replace unit(s) covered by this warranty, without charge to the consumer for labor or materials. YOU ARE RESPONSIBLE FOR ANY INSTALLATION OR REMOVAL CHARGES AND FOR ANY INITIAL SHIPPING CHARGES if the unit(s) must be shipped for warranty service. However, we will pay the return shipping charges to any destination within the U.S.A. if the repairs are covered by the warranty.
3. Any unit which in the judgment of OWI Inc. is defective or develops defects under normal use will be replaced or repaired without cost within the warranty period.
4. This warranty will be considered void if unit has been dropped, misused, abused, altered in any manner, overdriven with excessive amplification exceeding manufacturer's specification, improperly serviced or accidental damage.
5. OWI Inc. shall have no liability whatsoever for consequential damage. The sole responsibility and discretion of OWI Inc. under this warranty shall be limited to the repair of the product or replacement thereof.
6. IMPORTANT: This warranty is void unless the attached card is completed and mailed to OWI Inc. within 10 days following the date of purchase. Units must be sent to OWI Inc. or to the dealer where purchased.

OWI INCORPORATED
17141 Kingsview Ave
Carson, CA 90746-1207 USA

Date Purchased: _____
Model Number: _____
Serial Number: _____

(Keep this part for your record)

-----CUT AND MAIL-----



OWI INCORPORATED
17141 Kingsview Ave
Carson, CA 90746-1207 USA

LIMITED WARRANTY

Model Number: _____
Model Name: _____
Serial No. _____
Date of Purchase: Month: _____ Day _____ Year _____
Owner's Name: _____
Address: _____
City: _____ State _____ Zip _____
Dealer's Name: _____ City _____ State _____
Purchased from (please check one):
Video _____, Electronic _____, Mailorder _____, Mass Merchandiser _____, Installer _____
Others (please specify) _____
Remarks: _____



OWI Incorporated
Established 1978

OWI Incorporated

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